

CLAIMS

1. A process for the treatment of waste gas wherein the waste gas is contacted with a zeolite Y which has a unit cell size of 24.17-24.45 Å and a water adsorption capacity ($p/p_0 = 0.2$, $T=25^{\circ}\text{C}$) of at most 5 wt.%, characterised in that the zeolite has a silica-alumina molar ratio of at least 40.
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2. The process of claim 1 wherein the waste gas is engine exhaust gas, in particular exhaust gas from a diesel or gasoline engine.
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3. The process of any of the preceding claims, wherein the zeolite functions as an adsorbent which adsorbs organic hydrocarbons at a low temperature and desorbs them at a higher temperature.
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4. The process of claim 1 or 2 wherein the zeolite is part of an oxidation catalyst, the zeolite optionally comprising a noble metal of Group VIII of the periodic table of elements.
- 20 5. The process of claim 1 or 2 wherein the zeolite is part of a NO_x reducing catalyst and/or of a NO_x trap catalyst, the zeolite optionally comprising noble metal of Group VIII of the periodic table of elements and/or a non-noble metal of Group VIII of the periodic table and optionally an alkaline earth metal component such as barium.
- 25 6. A process for the treatment of exhaust gas from a diesel engine, wherein the engine exhaust system is provided with a hydrocarbon adsorbent and/or an oxidation catalyst and/or a NO_x conversion catalyst and/or a NO_x trap catalyst, wherein the hydrocarbon adsorbent and/or
30 and or the oxidation catalyst and/or the NO_x conversion catalyst and/or

the NO_x trap catalyst comprise a zeolite Y which has a unit cell size of 24.17-24.45 Å, a water adsorption capacity ($p/p_0 = 0.2$, $T=25^{\circ}\text{C}$) of at most 5 wt.% and a silica-alumina molar ratio of at least 40.

- 5 7. The process of any of the preceding claims wherein the zeolite is periodically subjected to a temperature above 350°C.
8. A unit suitable for the treatment of exhaust gas according to any one of the preceding claims, which comprises a zeolite Y which has a unit cell
10 size of 24.17-24.45 Å, a water adsorption capacity ($p/p_0 = 0.2$, $T=25^{\circ}\text{C}$) of at most 5 wt.%, and a silica-alumina molar ratio of at least 40
9. The unit of claim 8 which comprises a monolith at least part of the surface of which is coated with the zeolite.
- 15 10. The unit of claim 8 or 9 which additionally comprises a Group VIII non-noble metal and/or a Group VIII noble metal, and/or an alkaline earth metal, and/or a Group I metal.